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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,891	11/26/2003	Takamitsu Soda	01306.000115	5985
5514	7590	09/09/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			CHEN, SOPHIA S	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/721,891	SODA ET AL.	
	Examiner	Art Unit	
	Sophia S. Chen	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 18 July 2005.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-4, 6-9 and 11-20 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 1-4, 14-18 and 20 is/are allowed.

6) Claim(s) 6, 8, 11 and 19 is/are rejected.

7) Claim(s) 7, 9, 12 and 13 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 18 July 2005 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see pages 29 and 30 of the amendment, filed 7/18/05, with respect to the rejection(s) of claim(s) 6 under Kibune have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newfound reference, Munakata (US Pat. No. 5,970,278).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 6, 8, 11, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kibune in view of Munakata.

Kibune discloses an image forming apparatus comprising: a plurality of movable image carriers 16, 26, the image carriers 16, 26 forming latent images upon exposure 18,28 at respective exposing positions to form a toner image at the latent images (column 9, lines 38-40 and Figure 18); a movable intermediate transfer body 10, to which the toner image is transferred from the image carriers 16, 26, for carrying the toner image (column 9, lines 53-58); and contacting member 61 separably contacting to the intermediate transfer body 10 at a contacting position (Figures 18 and 34), wherein the image carrier 16 located most closely to the contacting position in a direction extending along the intermediate transfer body 10 on a downstream side in a moving direction a of the intermediate transfer body 10 with respect to the contacting position, defines a first image carrier 16 where a position for transfer between the first image carrier 16 and the intermediate transfer body 10 defines a first transfer position (around roller 41, Figure 18), wherein the image carrier 26 located most closely to the contacting position in a direction extending along the intermediate transfer body on an upstream side in a moving direction a of the intermediate transfer body 10 with respect to the contacting position, defines a second image carrier 26 where a position for transfer between the second image carrier 26 and the intermediate transfer body 10 defines a second transfer position (around roller 42, Figure 18), wherein a toner image formed on the intermediate transfer body 10 is transferred onto a transfer material P after passing through the first transfer position (around roller 41) and the second transfer position (around roller 42) again (Figure 18), and wherein formula  $Lb+Sb \geq Lm$  is satisfied where a distance from the contacting position to the second transfer position (around roller 42)

along the moving route of the intermediate transfer body 10 in a direction reverse to the moving direction a of the intermediate transfer body 10 is set as Lb, where a distance from the exposing position (around reference numeral 28, Figure 18) on the second image carrier 26 to the second transfer position (around roller 42) along the moving direction of the second image carrier 26 is set as Sb, and where an image length formed on the intermediate transfer body is set as Lm (column 5, lines 56-61; column 6, lines 51-52; Figure 18).

Kibune further discloses the contacting member 61 is a means for cleaning toner remaining after transfer of the toner image from the intermediate transfer body 10 to the transfer material P (column 10, lines 62-64); wherein formula  $Lb+Sb+La-Sa>Lm$  is satisfied where a distance from the contacting position to the first transfer position (around roller 41) along the moving direction a of the intermediate transfer body 10 is set as La, and where a distance from the exposing position (around reference numeral 18, Figure 18) on the first image carrier 16 to the first transfer position (around roller 41) along the moving direction of the first image carrier is set as Sa (Figure 18); and the image length Lm formed on the intermediate transfer body 10 is set as a longest image which the image forming apparatus can form on the intermediate transfer body 10 (column 5, lines 56-61 and column 6, lines 51-52; Figure 18).

Kibune differs from the instant claimed invention in not disclosing the latent image formation on the second image carrier is done at a time different from a contacting operation of the contacting member.

Munakata discloses an image forming apparatus comprising an intermediate transfer belt cleaning means 3 being spaced from an intermediate transfer belt 2 from the start of the printing operation to the end of primary transfer of the leading edge of the last image (column 4, lines 21-27). Inherently, the latent image formation is part of the printing operation.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the timing for the cleaning means as taught by Munakata to the contacting member of Kibune to reduce abrasion between the intermediate transfer belt and the cleaning means (contacting member).

***Allowable Subject Matter***

5. Claims 1-4, 14-18, and 20 are allowed.
6. Claims 7, 9, 12, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2852

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen  
Primary Examiner  
Art Unit 2852

Ssc  
September 6, 2005

50/9/6 (28) ~~monday~~

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Takamitsu SODA, et al.

Application No.: 10/721,891

Filed: November 26, 2003

For: IMAGE FORMING APPARATUS ) July 18, 2005

Commissioner for Patents  
Post Office Box 1450  
Alexandria, VA 22313-1450

**SUBMISSION OF REPLACEMENT SHEETS OF THE DRAWINGS**

Sir:

Applicant is in receipt of an Official Action, dated April 18, 2005, in the above-identified application. A Response to the Official Action is due on July 18, 2005, and is being filed concurrently herewith.

Enclosed are ten (10) replacement sheets of corrected formal drawings to be substituted for the corresponding sheets presently on file in the application. In the substitute sheets, the legend --PRIOR ART-- has been added to Figure 10 as required by the Examiner

In addition, Figures 1 through 9 of improved quality have been resubmitted herewith.